

# MEMORANDUM

## Science Priorities and Principles of Operation

### Southeast Climate Adaptation Science Center

November 2018 Update

This memorandum presents science priorities and principles of operation for the Southeast Climate Adaptation Science Center (SE CASC) that will guide SE CASC activities in FY18 and 19. The Southeast Climate Adaptation Science Center (SE CASC) was established in 2010 at North Carolina State University (NCSU) in Raleigh, North Carolina under a cooperative agreement with the U.S. Geological Survey (USGS).

The SE CASC **develops and delivers science-based information to support adaptation decisions by natural and cultural resource managers**. In the southeastern United States, the management partners consist primarily of US Fish and Wildlife Service, National Park Service, and state & tribal fish and wildlife agencies faced with the impacts of changing climate and land use in the region.

Consultation with these partners in 2018 identified three science priorities supportive of Department of the Interior Secretarial Priorities published in 2018 (sidebar):

SE CASC Science Priority 1 - **Exposure**: Improve partner understanding of what climate and land use change processes and associated biophysical stressors will look like on the land and water they manage.

SE CASC Science Priority 2 - **Impacts**: Improve partner understanding of ecosystem, habitat, and species impacts of climate and land use change, as well as the understanding of how these changes affect resources of specific concern to resource managers.

SE CASC Science Priority 3 - **Adaptation**: Increase partner understanding of, and access to, practical guidance for framing and making smart climate and land use change adaptation decisions.

#### Secretary of the Interior Priorities

- 1) **Creating a conservation stewardship legacy second only to Teddy Roosevelt**
  - a) Utilize science to identify best practices to manage land and water resources and adapt to changes in the environment;
  - b) Examine land use planning processes and land use designations that govern public use and access;
  - c) Revise and streamline the environmental and regulatory review process while maintaining environmental standards.
  - d) Review DOI water storage, transportation, and distribution systems to identify opportunities to resolve conflicts and expand capacity;
  - e) Foster relationships with conservation organizations advocating for balanced stewardship and use of public lands;
  - f) Identify and implement initiatives to expand access to DOI lands for hunting and fishing;
  - g) Shift the balance towards providing greater public access to public lands over restrictions to access.
- 2) **Utilizing our natural resources**
  - a) Ensure American Energy is available to meet our security and economic needs;
  - b) Ensure access to mineral resources, especially the critical and rare earth minerals needed for scientific, technological, or military applications;
  - c) Refocus timber programs to embrace the entire 'healthy forests' lifecycle;
  - d) Manage competition for grazing resources.
- 3) **Restoring trust with local communities**
  - a) Be a better neighbor with those closest to our resources by improving dialogue and relationships with persons and entities bordering our lands;
  - b) Expand the lines of communication with Governors, state natural resource offices, Fish and Wildlife offices, water authorities, county commissioners, Tribes, and local communities.
- 4) **Ensuring sovereignty means something**
  - a) Support tribal self-determination, self-governance, and sovereignty;
  - b) Solidify mutual interests between the U.S. and the freely associated states and territories.
- 5) **Generating additional revenues to support DOI & National interests**
  - a) Ensure that the public receives the full market value for the natural resources produced on federal lands;
  - b) Ensure that fees or costs levied for DOI services are reasonable and targeted to achieve cost recovery;
  - c) Consider the impact of DOI decisions on economic development and job creation.
- 6) **Protecting our people and the border**
  - a) Actively support efforts to secure our southern border;
  - b) Ensure DOI law enforcement staffing addresses public safety risks anticipated on DOI land.
  - c) Promote a "public service" demeanor within our law enforcement community.
- 7) **Striking a regulatory balance**
  - a) Reduce the administrative and regulatory burden imposed on U.S. industry and the public;
  - b) Ensure that Endangered Species Act decisions are based on strong science and thorough analysis.
- 8) **Modernizing our infrastructure**
  - a) Support the White House Public/Private Partnership Initiative to modernize U.S. infrastructure;
  - b) Remove impediments to infrastructure development and facilitate private sector efforts to construct infrastructure projects serving American needs;
  - c) Prioritize DOI infrastructure needs to highlight:
    - i) Construction of infrastructure;
    - ii) Cyclical maintenance;
    - iii) Deferred maintenance.
- 9) **Reorganizing for the next 100 years**
  - a) Improve alignment and integration of the DOI organizational structure;
  - b) Redistribute organizational resources (people and funding) to enhance mission achievement and improved public service;
  - c) Improve organizational alignment with Executive Branch counterparts with major land management assets or influence.
- 10) **Achieving our goals and leading our team forward**
  - a) Senior executives are expected to provide leadership in achieving goals of the President and the Secretary;
  - b) The Management Team is expected to:
    - i) Ensure cost-effective operations and quality service to the public;
    - ii) Facilitate organizational cooperation and conflict resolution;
    - iii) Ensure the workplace environment is conducive to employee productivity and safety;

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## Strategic Science Priorities

For each of the three partner science priorities, a brief summary of DOI and other partner science interests, along with one or more potential science goals, follows. Appendix A of this memorandum presents science opportunities associated with these goals. These priorities, goals, and science opportunities will focus annual SE CASC funding opportunities in FY18 and 19.

**Science Priority 1 - Exposure: Improve partner understanding of what climate and land use change processes and associated biophysical stressors will look like on the land and water they manage.**

### SE CASC Science Goals:

- **Advance partner understanding of regional climate-related stressors.** SE CASC will provide federal and state partners with guidance on the appropriate uses of the steady flow of new information about climate-related stressors such as sea level rise and wildfires.
- **Advance partner understanding of regional land use change-related stressors.** SE CASC will provide federal and state partners with up to date information about land use changes as well as science-based projections of change.

**Science Priority 2 - Impacts: Improve partner understanding of ecosystem, habitat, and species impacts of climate and land use change, as well as the understanding of how these changes affect resources of specific concern to resource managers.**

### SE CASC Science Goals:

- **Improve partner understanding of how habitats and ecosystems will be affected by changing climate and land use.** SE CASC science will assist federal, state, and tribal resource management agencies understand the impacts of changing climate and land use in the Southeast on habitats and ecosystems that are important for meeting agency management goals.
- **Improve partner understanding of how species of conservation concern will be affected by changing climate and land use.** SE CASC will work as a science partner with federal and state conservation agencies and with other researchers to meet agencies at-risk and species of conservation concern science needs.

**Science Priority 3 - Adaptation: Increase partner understanding of, and access to, practical guidance for framing and making smart adaptation decisions.**

### SE CASC Science Goals:

- **Improve partner understanding and characterization of why natural and cultural resources matter in the face of climate and land use change.** SE CASC science efforts should help those making management decisions understand how those decisions affect the resources that matter to them.
- **Improve partner understanding of the portfolio of potential adaptation actions available to managers in the Southeast.** SE CASC science efforts should support managers who are seeking the best possible portfolio of adaptation strategies for the resources they manage.

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- **Improve partner understanding and use of tools for assessing competing adaptation options.** The SE CASC will support the development and use of science knowledge needed by managers to make smart management decisions related to climate and land use change.
- **Work with partners to define an ongoing research and implementation strategy for the Southeast Conservation Adaptation Strategy.** The SE CASC science will support efforts by federal and state natural resource management partners to coordinate adaptation efforts.
- **Prepare the next generation of scientists to better understand and address adaptation and resource management challenges.** SE CASC university and federal and state management partners will support efforts to train the next generation of natural resource managers and researchers so that they are well prepared to develop science that makes a difference for managers.
- **Build the capacity of professional natural resource managers to access and use climate and land use change science.** SE CASC staff and funded research will facilitate the understanding and wise use of climate and land use science products.
- **Improve understanding of communication needs for all stages of co-produced actionable science.** The SE CASC will support researchers and managers to promote appropriate, effective communication throughout their project's life cycles.

### SE CASC Operating Principles

Nine principles will guide SE CASC activities addressing these partner priorities. Together these principles suggest important expectations that SE CASC partners, including the SAC, should have regarding how the SE CASC operates. Details of these principles is provided in Appendix B.

1. Resource management priorities drive SE CASC science activities.
2. Resources are biocultural, derived from interacting natural and human systems.
3. SE CASC science should be actionable, co-produced and useful.
4. SE CASC co-produced actionable science should acknowledge the “wicked” nature of most adaptation problems.
5. SE CASC co-produced, actionable science depends on collaboration among partners.
6. Successful SE CASC partnerships requires communication.
7. Successful SE CASC partnerships requires capacity building.
8. Successful SE CASC partnerships require coordination.
9. Success in addressing SE CASC partner priorities depends on collaborations between USGS and its University host consortium.